Serial No. 10/539,938

Atty. Doc. No. 2002P08684WOUS

Amendments to the Claims:

Applicants reserve the right to pursue any canceled claims at a later date.

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-9 (canceled)

10. (currently amended) A method for the electrolytic deposition of an alloy comprising at least two constituents as a layer on an iron, nickel or cobalt superalloy substrate, comprising:

arranging the alloy in an electrolyte and the at least two constituents of the alloy are suspended and/or dissolved suspending and/or dissolving the at least two constituents of the alloy in an electrolyte bath;

arranging the substrate in the electrolyte;

using a plurality of repeated voltage pulses for the electrolytic deposition and combined in a sequence that comprises at least two different blocks;

<u>applying a constant low potential between the at least two different blocks to establish a</u> <u>base current such that deposition is not interrupted between voltage pulses of the blocks:</u>

adapting one-each of the at least two blocks in each case to a constituent of the alloy in each case to achieve an optimum duration and nature of the deposition of each of the constituents relative to its optimized block and a-each block comprising two or more voltage pulses for each constituent of the alloy, and

following a first block of a sequence by a second block in the same sequence of the same polarity and the second block has a higher or lower voltage level on account of being adapted to one constituent of the alloy.

wherein the deposited alloy is an MCrAlY layer arranged on the superalloy substrate, with M being an element selected from the group consisting of iron, cobalt and nickel.

11. (currently amended) The method as claimed in claim 10, wherein mechanical vibrations are imparted to the electrolyte <u>bath</u>.

Serial No. 10/539,938

Atty. Doc. No. 2002P08684WOUS

- 12. (currently amended) The method as claimed in claim 11, wherein an ultrasound probe is operated in the electrolyte <u>bath</u>.
- 13. (previously presented) The method as claimed in claim 10, wherein a current/voltage pulse is used for the electrolytic deposition and is defined by the current/voltage pulse time profile.
- 14. (previously presented) The method as claimed in claim 13, wherein a current/voltage pulse time profile is a square-wave or a delta-wave form.
- 15. (previously presented) The method as claimed in claim 10, wherein both a positive and a negative current/voltage pulses are used for the electrolytic deposition.
- 16. (previously presented) The method as claimed in claim 10, wherein a block is defined by a number of current pulses, pulse duration, interpulse period, current intensity, and time profile.
 - 17. (canceled).
- 18. (previously presented) The method as claimed in claim 10, wherein a gradient in the composition of the material is produced in an alloy layer.
 - 19.-20. (canceled).